Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A calculation method for producing a recursive digital filter, implemented in a signal processor working with integers, the method comprising:

~~a stage of~~ calculating an~~the~~ output signal of a sample n based on an algebraic sum of input and output values of signals sampled at a selected~~the~~ point in time ~~considered~~ and at previous points in time, to which coefficients characteristic of the filter have been assigned~~,~~; ~~wherein the stage is coupled with two other calculation stages, in one calculation stage the~~

applying a chosen scale factor ~~chosen is applied~~ to ~~the~~ remainders of ~~the~~ integer divisions, the remainders being ~~the~~a result of calculating the output values~~signals~~ of the previous samples~~,~~; and ~~in the other calculation stage~~

changing a number obtained from rounding to ~~the~~a default integer value obtained ~~coming~~ from dividing the output value~~signal~~ by the scale factor ~~is replaced by~~ based on a number obtained from rounding to ~~the~~a closest integer to ~~the~~a real-number quotient thereof.

2. (Currently Amended) A calculation method for producing a recursive digital filter, implemented in a signal processor working with integers, the method comprising: ~~a stage of~~

calculating an~~the~~ output signal of a sample n based on an algebraic sum of input and output values of signals sampled at a selected~~the~~ point in time ~~considered~~ and at previous points in time, to which coefficients characteristic of the filter have been assigned~~,~~; and ~~wherein the stage is coupled with another calculation stage in which the~~

applying a chosen scale factor ~~chosen is applied~~ to ~~the~~ remainders of ~~the~~ integer divisions, the remainders being ~~the~~a result of calculating the output values~~signals~~ of the previous samples.

3. (Currently Amended) A calculation method for producing a recursive digital filter, implemented in a signal processor working with integers, the method comprising:

~~a stage of~~ calculating an~~the~~ output signal of a sample n based on an algebraic sum of input and output values of signals sampled at a selected ~~the~~ point in time ~~considered~~ and at previous points in time, to which coefficients characteristic of the filter have been assigned;~~,~~ and ~~wherein the stage is coupled with another calculation stage in which~~

changing a number obtained from rounding to a~~the~~ default integer value obtained~~coming~~ from dividing the output value~~signal~~ by a~~the~~ scale factor ~~is replaced~~ by a number obtained from rounding to a~~the~~ closest integer to the real-number quotient thereof.

4. (Original) A recursive digital filter produced by using the calculation method according to claim 1.

5. (Original) A recursive digital filter produced by using the calculation method according to claim 2.

6. (Original) A recursive digital filter produced by using the calculation method according to claim 3.

7. (Original) An active sound protection system using the recursive digital filter according to claim 4.

8. (Original) An active sound protection system using the recursive digital filter according to claim 5.

9. (Original) An active sound protection system using the recursive digital filter according to claim 6.

10. (Original) A negative feedback regulation system using the recursive digital filter according to claim 4.

11. (Original) A negative feedback regulation system using the recursive digital filter according to claim 5.

12. (Original) A negative feedback regulation system using the recursive digital filter according to claim 6.

13. (New) The calculation method of claim 1, wherein the calculating, applying and changing steps are performed during a single cycle of the recursive digital filter.

14. (New) The calculation method of claim 2, wherein the calculating and applying steps are performed during a single cycle of the recursive digital filter.

15. (New) The calculation method of claim 3, wherein the calculating and changing steps are performed during a single cycle of the recursive digital filter.